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Cheap Food and Farm Subsidies: Policy Impacts of a Mythical Connection

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Until recently, U.S. corn exports destined for Canada faced a \$1.65-per-bushel tax. This tax, or import tariff, was Canada's response to claims made by Canadian corn farmers that they are the victims of subsidized and dumped U.S. corn. The Canadian International Trade Tribunal just ruled against the import tariff.

The claim of injury to Canadian corn producers was based on the notion that U.S. corn farmers consistently sell their corn for less than it costs to produce it. That is, cheap U.S. corn is "dumped" in Canada. It was further argued that the reason why corn farmers can sell for such a low price and remain in business is that U.S. subsidies keep them afloat. Implicit in this argument is that if U.S. corn subsidies were eliminated, then U.S. corn production would decrease and the U.S. and Canadian prices of corn would increase. This story is certainly consistent with many arguments made in the United States by supporters of U.S. farm programs. For example, Hembree Brandon writes in the *Delta Farm Press*:

They [farm payments] really are a food subsidy assistance in disguise, and he [Ken Cook] and every person in this county (sic) who buys food and eats three squares a day are beneficiaries of it—U.S. citizens pay far less for food than



anyone on the planet. They are also a food security subsidy in disguise. God help the U.S. if it becomes as dependent on offshore food as it is offshore oil. (December 10, 2004)

Implicit in Mr. Brandon's argument is that U.S. farm production would decline without U.S. farm payments, with resulting increases in commodity and food prices.

The argument by Canada that their producers are harmed by low prices resulting from U.S. corn subsidies is similar to Brazil's argument made in their World Trade Organization (WTO) dispute against the U.S. cotton program. Brazil successfully made the case that cotton payments increased U.S. production and lowered world prices to the detriment of Brazilian cotton producers. The WTO panel ruled that the United

States needed to eliminate its export subsidy program, called Step 2, and it needed to eliminate programs that increase production and suppress world prices.

What does all of this portend for U.S. corn farmers? If U.S. farm programs really are a "cheap food" policy in disguise, then Canadian corn farmers would seem to have a valid argument that they have been harmed by U.S. subsidies. Is this argument valid? If so, then is the U.S. corn program as vulnerable to a negative WTO panel ruling as was cotton?

Farm Programs and Cheap Food

U.S. farmers often justify farm program payments by linking the payments to the small share of U.S. disposable income that is spent on food. Those who make this linkage attribute high productivity and high production at the farm level to program payments. The availability of less-expensive raw ingredients then decreases production costs of food processors and manufacturers, leading to lower food prices. If this story is true, then a removal of farm program payments should lead to higher food prices. Logically, the largest increases should show up in food products in which currently subsidized raw ingredients (corn, wheat, or soybeans) make up the largest share of total production costs.

A reasonable formula for approximating how the price of a food item would change because of a change in the price of a raw ingredient is to multiply the percent change in the price of the raw ingredient by the share of the price of the food item that is represented by the cost of the raw ingredient. For example, corn



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represents perhaps 38 percent of the cost of producing a market-ready hog. The cost of a market-ready hog represents 28 percent of the final retail price of pork. This means that corn represents approximately 10.64 percent of the retail price of pork.

Suppose that the removal of farm programs caused the price of corn to increase by 5 percent. The price of pork would then increase by about 0.53 percent. That is, pork chops that cost \$3.00 per pound with farm subsidies would increase in price by less than two cents per pound. If corn prices were to rise by 10 percent with the removal of subsidies, then pork chops would cost only three cents per pound more than they currently do. Because corn represents a smaller share of the final value of beef and dairy products, retail prices for these products would go up by a smaller amount (in percentage terms) than the price of pork.

It is difficult to come up with examples in which subsidized U.S. commodities have a greater than 10 percent share of final retail value. And at this maximum share, it would take a doubling of commodity prices to increase consumer prices by 10 percent. But no credible analyst has ever estimated that farm payments result in such a large supply expansion that their withdrawal would cause commodity prices to double. The idea that U.S. commodity policy is really a cheap food policy is a myth.

Supporters of farm programs who incorrectly justify them as providing cheap food to U.S. consumers should realize that they are providing ready ammunition to those countries who want to attack U.S. farm subsidies as being harmful to their domestic producers. After all, U.S. and world prices move together because the commodities that receive U.S. subsidies are widely traded on international markets. If farm payments reduce U.S. prices, then they also reduce world prices,

which means that farmers around the world are hurt by U.S. farm payments. Given the very large commodity price changes that would be required for a cheap food policy to be a reality, does use of this rationale for U.S. farm programs really serve U.S. producer interests?

A concrete example of how this type of argument can be used against U.S. producer interests is the compelling argument that Brazil used in the cotton case that was obtained directly from supporters of the U.S. cotton program. In testimony about the impacts of stricter payment limits, supporters of lax payment limits argued that stricter payment limits would cause a significant decrease in U.S. cotton production. Put another way, cotton payments cause cotton acreage to increase, which is exactly what Brazil was arguing.

Do U.S. Subsidies Decrease Commodity Prices?

Even if farm subsidies do not lead to cheap food, they can lead to cheap commodities, which potentially makes U.S. farm programs vulnerable to further WTO panel judgments.

One of the key lessons of Economics 101 is that it is a simple matter for government to get more of anything it wants: simply subsidize its production. Although final 2005 payments have not yet been determined, payments to U.S. corn producers are expected to average 26.7 percent of market revenue over the three crop years 2003, 2004, and 2005. Total corn payments over these three years are expected to be \$20.5 billion. Experts supporting Canada's position in the ongoing corn tariff case point to this 26.7 percent subsidy rate as prima facie evidence that U.S. corn payments increase production, thereby lowering world corn prices. But, as is so often the case, reality is more complicated than a simple application of a les-

son learned in an introductory economics course.

The first nuance is that 31 percent of U.S. corn payments over this period (direct payments) are specifically designed not to influence U.S. corn plantings. These payments do not depend on prices, production levels, acreage levels, or even whether farmers plant a crop. The one restriction is that farmers cannot plant fruits, tree nuts, or vegetables on land that qualifies for these payments. This “fruit and vegetable exclusion” is relatively unimportant for corn, because the majority of corn land is best suited for feed grain production. If we remove direct payments from the calculations, then corn payments drop to 18.5 percent of market revenue—still a large number.

The second nuance we need to account for is that 43 percent of the payments remaining after direct payments are removed are also designed to have minimal influence on planting decisions. Farmers cannot change the size of countercyclical payments for corn by changing acreage or production levels, so these payments provide no direct incentive to plant more corn when market prices are expected to be low. However, countercyclical payments increase when market prices drop, so they do provide some price protection to farmers. Thus, although nobody knows for sure, most economists believe that these payments provide some incentive for farmers to plant corn. Analysts with the Food and Agricultural Policy Research Institute assume that \$10.00 of expected countercyclical payments per acre provides the same production incentive as \$2.50 of expected market revenue. Accordingly, if we remove 75 percent of countercyclical payments, then corn payments drop to 11.7 percent of market revenue—still a significant number but fast becoming less significant.

Supporters of farm programs who incorrectly justify them as providing cheap food to U.S. consumers should realize that they are providing ready ammunition to those countries who want to attack U.S. farm subsidies as being harmful to their domestic producers.

There is near unanimity among economists that increases in expected marketing loan gains and loan deficiency payments will increase planted acreage because they are paid on all current production. However, it would be a mistake simply to conclude that farmers increased corn acreage from 2003 to 2005 because farmers expected an 11.7 percent average boost in revenue from corn payments. We have to look at market conditions at the time that farmers decide what to plant to determine the influence of the programs.

As previously discussed in this publication, producers obtain the largest benefit from the current set of farm programs in bumper-crop/low-price years. We had back-to-back bumper crops in 2004 and 2005, with 2004 being the largest increase over trend yields in history. By definition,

bumper crops are unexpected. Thus, the size of the payments that arrived was also unexpected. An additional surprise factor in 2005 was the large and negative impact of Hurricane Katrina on local prices at harvest time. Most corn farmers took advantage of these low prices to lock in large windfall payments. Thus, we also need to reduce the 11.7 percent payment rate by the degree of “surprise” before we can conclude that U.S. commodity programs significantly changed farmers’ acreage decisions.

This discussion is not an attempt to minimize the impacts of U.S. farm subsidies on farmers’ acreage decisions. Rather, it is meant to illustrate how complicated estimation of the impacts actually is. Farmers base their decisions about what and how much to plant on numerous factors, including rotation considerations, production costs, expected market prices, availability of crop insurance, and expected benefits from farm programs. The complicated nature of these decisions makes it quite difficult to determine if U.S. farm programs for crops other than cotton are vulnerable to a WTO case against them on the basis of price suppression. The role that these programs play in farmers’ planting decisions varies across crops, regions, and crop years. Simple “rules of thumb” that use total payment levels as a guide or the belief that the programs work as a cheap food policy are inadequate measures of the impacts of farm payments on U.S. supply and international commodity prices. ♦

Note of Disclosure: Professor Babcock was an expert witness testifying for a major Canadian corn importer in the inquiry by the Canadian International Trade Tribunal. In addition, he provided modeling assistance in 2003 to Professor Daniel Sumner, who was an expert witness for Brazil in the cotton case.